Remarks

Claim 3 is cancelled and claims 1, 6 and 10 are amended. Claims 1, 2 and 4 to 10 are pending in this application of which only claims 1 and 10 are in independent form.

Independent claims 1 and 10 were rejected under 35 USC 102(b) as being anticipated by Paffrath et al. Claims 1 and 10 are both amended to incorporate therein the subject matter of cancelled claim 3 and the following will show that claims 1 and 10, as amended, patentably distinguish the applicants' invention over this reference.

Paffrath et al does indeed disclose the use of an air mass flow in a bypass line to the throttle flap for the drive of a turbine of a secondary air charger; however, this reference does not suggest the adaptation of a value for this air mass flow by making a comparison of a measured air flow to the engine with a modeled air flow to the engine. Instead, column 9, lines 24 and 25 of Paffrath et al disclose the use of a sensor 42c which measures the air flow at the turbine end (please see also FIG. 3 of Paffrath et al). An adaptation of the value for the air mass flow via the turbine of the secondary air charger by a comparison of a measured air supply to the engine with a modeled air supply to the engine is not suggested in Paffrath et al.

With respect to the subject matter of applicants' claim 3, reference is made in the action to column 8, lines 50 to 59, and column 9, lines 5 to 14 of Paffrath et al. These passages tell us that the secondary air system is equipped with a control

unit 39 which communicates with the motor control 40. For the control of the valve, a set of curves can be stored in the control unit 39 which permit the processing of different values measured in the secondary air system and the motor. At least the throughput of the secondary air flow 21 is detected with the aid of the sensor 42a and the position of the throttle flap. In lieu of the sensor 42a, also a sensor 42c can be provided which measures the air flow at the turbine end. The control unit serves for the simultaneous operation of the control valve 41 and of a throttle valve 38a. The control valve controls the ambient air flow 19, while the throttle valve 38 is intended to regulate the effective secondary air flow. The throttle valve 38 is provided in a secondary air duct 43 which defines a bypass for the compressor 20. In this way, the effective secondary air flow can be regulated by opening the throttle valve 38a and feeding back the compressed air.

The passages of Paffrath et al quoted in the action (column 8, lines 50 to 59) is directed only to the measurement of the air flow at the turbine end by the sensor 42c; however, not the subject matter of claim 3 which is now part of claim 1, namely:

> "adapting a value of the air mass flow through said turbine by comparing a measured air supply to said engine to a modeled air supply <u>to said engine</u>."
> (emphasis added)

According to the above feature, a value for the air mass flow through the turbine of the secondary air charger is adapted by comparing a measured air supply to the engine with a modeled air supply thereto.

Applicants respectfully submit that Paffrath et al discloses no adaptation of the air mass flow through the turbine of the secondary air charger; instead, this reference only shows the measurement of the air mass flow thereof by the sensor 42c. Furthermore, Paffrath et al does not suggest the comparison of a measured air supply to a modeled air supply to the internal combustion engine. Paffrath et al especially offers no suggestion to our person of ordinary skill as to the modeling of an air supply to the internal combustion engine. Aside from the fact that Paffrath et al does not disclose the adaptation of the air mass flow through the turbine of the secondary air charger, this reference certainly does not suggest the above-quoted feature which is now part of both claims 1 and 10 according to which such an adaptation takes place via comparing a measured air supply to a modeled air supply to the internal combustion engine.

The method of claim 1 and the arrangement of claim 10 afford the advantage that it is ensured that the value for the air mass flow through the turbine of the secondary air charger during the entire service life of the vehicle is adapted and therefore can be correctly determined. Furthermore, the adapted air mass flow through the turbine of the secondary air charger makes possible a diagnosis of the operation with the secondary air charger.

As set forth in the applicants' disclosure on page 17, lines 8 to 14, for a properly operating secondary air charger 10, the adaptation value of the air mass flow $ms_{SLL,adap}$ then lies within a pregiven tolerance band about the modeled, non-adapted air mass flow $ms_{SLL,0}$. As noted on page 17, lines 15 to 20, if the adaption value $ms_{SLL,adap}$ of the air mass flow through the

turbine 25 lies outside of this tolerance band, then a defective function of the secondary air charger 10 is detected and a suitable fault measure is initiated.

The adaptation of a value of the air mass flow through the turbine by comparing a measured air supply to the engine to a modeled air supply to the engine is nowhere suggested in Paffrath et al.

In view of the foregoing, applicants submit that claim 1 patentably distinguishes their invention over Paffrath et al and should be allowable. Claims 2 and 4 to 9 are all dependent from claim 1 so that they too should now be allowable. Claim 10 parallels claim 1 in an apparatus context so that this claim too should be allowable.

Reconsideration of the application is earnestly solicited.

Respectfully submitted,

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